IN THE CLAIMS:

Cancel claims 39, 54 and 56.

Amend the claims as follows:

Claims 1-31 (Cancelled)

32. (Currently Amended) A high-voltage rotating electric machine, comprising:

a stator;

a rotor opposing said stator; and

a flexible high-voltage stator winding ~~configured to operate in an inclusive range of above 36 kV through a system voltage of a power network, said high-voltage winding being flexible~~ including

a current-carrying conductor,

an inner layer having semiconducting properties surrounding and being in electrical contact with said current-carrying conductor,

a solid insulating layer surrounding and contacting the inner layer, and

an outer layer having semiconducting properties surrounding and contacting the solid insulating layer; wherein said current-carrying conductor comprises a plurality of conductive elements, selected ones of said plurality of conductive elements being insulated from each other, and at least one of said plurality of conductive elements being uninsulated in order to electrically contact the inner layer.

33.(Original) A high-voltage rotating electric machine according to Claim 32, wherein the inner layer has substantially a same potential as the conductor.

34. (Original) A high-voltage rotating electric machine according to Claim 32, wherein the outer layer forms an equipotential surface surrounding the conductor.

35. (Original) A high-voltage rotating electric machine according to Claim 32, wherein the outer semiconducting layer is connected to a node at a selected potential.

36. (Original) A high-voltage rotating electric machine according to Claim 35, wherein the selected potential is earth potential.

37. (Original) A high-voltage rotating electric machine according to Claim 32, wherein said high-voltage stator winding comprises separate windings and a separate potential is selected for each of said separate windings.

38. (Original) A high-voltage rotating electric machine according to Claim 32, wherein at least one of said inner layer and said outer layer have substantially a same coefficient of thermal expansion as the solid insulating layer.

39. (Cancelled)

40. (Original) A high-voltage rotating electric machine according to Claim 32, wherein the inner layer and the outer layer have respective inner and outer contact surfaces and are secured to the solid insulating layer along substantially an entire length of each corresponding contact surface.

41. (Original) A high-voltage rotating electric machine according to Claim 32, wherein the stator comprises a laminated core.

42. (Original) A high-voltage rotating electric machine according to Claim 32, wherein the stator has a plurality of radial slots having axial cylindrical openings, said slots and cylindrical openings having a substantially circular cross section separated by narrower waist portions between the cylindrical openings.

43. (Original) A high-voltage rotating electric machine according to Claim 42, wherein the substantially circular cross section of the cylindrical openings are formed with a continuously decreasing radius as the slot radius decreases.

44. (Original) A high-voltage rotating electric machine according to Claim 42, wherein the substantially circular cross section of the cylindrical openings are formed with a discontinuously decreasing radius as the slot radius decreases.

45. (Original) A high-voltage rotating electric machine according to claim 32, wherein the machine is operable at 100% overload for a period of time from about 15 minutes to about two hours.

46. (Original) A high-voltage rotating electric machine according to Claim 32, wherein the machine is directly connectable to a power network without an intermediate transformer between the machine and the network.

47. (Original) A high-voltage rotating electric machine according to Claim 32, further including means for controlling a magnetic field flow through the rotor.

48. (Original) A high-voltage rotating electric machine according to Claim 32, being operable on a network without mechanical load for compensation of inductive or capacitive load on the network.

49. (Currently Amended) A high-voltage rotating electric machine having a magnetic circuit to a system voltage circuit, comprising:

a magnetic core; and

a flexible high-voltage winding ~~configured to operate at a high-voltage in an inclusive range of above 36 kV through a system voltage of a power network, said high-voltage winding being flexible~~ including:

a current carrying conductor having a plurality of conductive elements,

an inner semiconducting layer surrounding the current carrying conductor and being in electrical contact with at least one of said plurality of conductive elements,

an insulating layer of solid, extruded insulation surrounding and being in contact with the inner semiconducting layer, and

an outer semiconducting layer surrounding and being in contact with the insulating layer; wherein said current-carrying conductor comprises a plurality of conductive elements, selected ones of said plurality of conductive elements being insulated from each other, and at least one of said plurality of conductive elements being uninsulated in order to electrically contact the inner layer.

50.(Original) A high-voltage rotating electric machine according to Claim 49 wherein the machine has a rotor and an opposed stator, and a magnetic circuit is arranged in at least one of the stator and the rotor.

51. (Original) A high-voltage rotating electric machine according to Claim 49 wherein the outer semiconducting layer is severed at a plurality of locations forming a plurality of parts separately connectable to earth potential.

52. (Original) A high-voltage rotating electric machine according to Claim 49, wherein the core comprises a conductive static core having slots for receiving the high-voltage winding and being in electrical contact with the outer semiconducting layer such that an electric field of the machine outside the outer semiconducting layer in the slots and in an end winding region is near zero.

53. (Original) A high-voltage rotating machine according to Claim 49 wherein the conductive elements comprise a plurality of transposed conductors.

54.(Cancelled)

55.(Currently Amended) A high-voltage rotating electric machine, comprising:

a stator;

a rotor opposing the stator; and

a flexible high-voltage winding disposed in the stator~~. said high-voltage winding configured to operate at a high-voltage in an inclusive range of above 36 kV through a system voltage of a power network, said high-voltage winding being flexible~~ including:

one or more current carrying conductors having a coil side and coil ends;

an electric field confining insulating system including,

an inner layer surrounding the one or more current-carrying conductors and being in electrical contact with at least one of the current-carrying conductors,

a solid insulating layer surrounding and being in contact with the inner layer, and

an outer layer surrounding and being in contact with the solid insulating layer, said inner layer and said outer layer having a sufficient conductivity to establish an equipotential surface surrounding the conductors along the coil side and in the coil ends;

wherein said high voltage winding is selectively connectable to a plurality of system voltage levels.

56.(Canceled)

57.(Original) A high-voltage rotating electric machine according to claim 55, wherein said high-voltage winding includes a plurality of separate tapings configured to connect to different system voltage levels.

58.(Original) A high-voltage rotating electric machine according to claim 55, including a plurality of windings connectable to a system voltage level for each separate winding.

59.(Original) A high-voltage rotating electric machine according to Claim 55, including means for permitting exchange of electric energy between a plurality of electrical systems of different voltages.

60.(Currently Amended) A method of manufacturing a magnetic circuit for a rotating electric machine, the magnetic circuit being arranged in at least one of a stator and a rotor of the electric machine, the magnetic circuit including a magnetic core formed with slots configured to receive a winding formed from a high-voltage cable having a conductor, the slots being formed as cylindrical openings having a substantially circular cross section extending axially through the rotating electric machine and aligned in rows extending radially, comprising the steps of:

configuring the cable to be flexible ~~and to operate at a high-voltage in an inclusive range of above 36 kV through a system voltage of a power network~~ including forming the high-voltage cable with an electric field confining outer covering surrounding the conductor, and forming the conductor of a plurality of conductive elements, insulating from each other selected ones of said plurality of conductive elements other, and wherein at least one of said plurality of conductive elements being uninsulated, and electrically contacting the at least one uninsulated conductive element with the inner layer

threading the high-voltage cable in the cylindrical openings.

61.(Currently Amended) A rotating high-voltage electric machine, comprising:

a stator,

a rotor; and

a flexible high-voltage winding~~, said high-voltage winding configured to operate at a high-voltage in an inclusive range of above 36 kV through a system voltage of a power network, said high-voltage winding being flexible~~ including

at least one current-carrying conductor, and

an electric field confining cover surrounding the current-carrying conductor including

an inner layer surrounding and in electrical contact with the current-carrying conductor,

an insulating layer surrounding and in contact with the inner layer, and

an outermost layer surrounding and in contact with the insulating layer, said outermost layer having a conductivity for establishing an equipotential surface around the current-carrying conductor,

said current-carrying conductor comprises a plurality of conductive elements, selected ones of said plurality of conductive elements being insulated from each other, and at least one of said plurality of conductive elements being uninsulated in order to electrically contact the inner layer. wherein

said high-voltage winding is configured to form at least a full uninterrupted turn in the winding of said machine.

62.(Original) The machine of Claim 61, wherein the outermost layer is in electrical contact with the stator.

63.(Original) The machine of Claim 61, wherein the inner and outermost layers have semiconducting properties.

64.(Original) The machine of Claim 61, wherein the cover is formed of a plurality of layers including an insulating layer and wherein said plurality of layers are substantially free of cavities and pores.

65.(Original) The machine of Claim 61, wherein the layers of the cover have substantially the same temperature coefficient of expansion.

66.(Original) The machine of Claim 61, wherein the machine is operable at 100% overload for two hours.

67.(Original) The machine of Claim 61, wherein the cable is operable free of end winding loss.

68.(Original) The machine of Claim 61, wherein the high-voltage winding is operable free of partial discharge and field control.

69.(Original) The machine of Claim 61, wherein the high-voltage winding comprises multiple uninterrupted turns.

70.(Original) The machine of Claim 61, wherein the high-voltage winding comprises a cable.